

Smoking Prohibition Outside Building Entrances on Campus: Is it Working?

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Background

- Smoking outside building entrances can expose building users to second hand smoking when entering/exiting
- The Toronto Municipal Code smoking restriction states that “no person shall smoke within a nine-meter radius surrounding any entrance or exit of a public building” which is also highlighted in the Ryerson University Community Regulations
- A study by Kaufman et al. (2010) showed that more than a third of the total observed smoking behaviours were within 9 meters of public building entrances in downtown Toronto
- Vaporizers and electronic cigarettes (e-cigs) have experienced a rapid growth in popularity and may constitute a legal/policy “gray area”

Objectives

- Observe building entrances on Ryerson campus to:
- Measure the frequency of smoking on campus in prohibited zones
 - Examine the prevalence of vaporizers and e-cigs
 - Describe the key observable characteristics of smokers in prohibited zones on campus

Methods

- Buildings were randomly selected from the campus map to provide geographic coverage of the campus (see Fig 1)
- Each selected location was examined in Google map satellite view and a scale was used to establish a 9m radius (see Fig 2)
- 10 minutes for each observation session, each selected building was observed twice
- Google form was created to record original data and prevent intervention
- Smokers within 9 meters were counted, characteristics of smokers and weather conditions were recorded.
- 83 smoking behaviors during 28 observation sessions were analyzed by using JMP 13 software.
- Table 1 details the weather condition variables
- Table 2 details the descriptive variables of each observed smoker

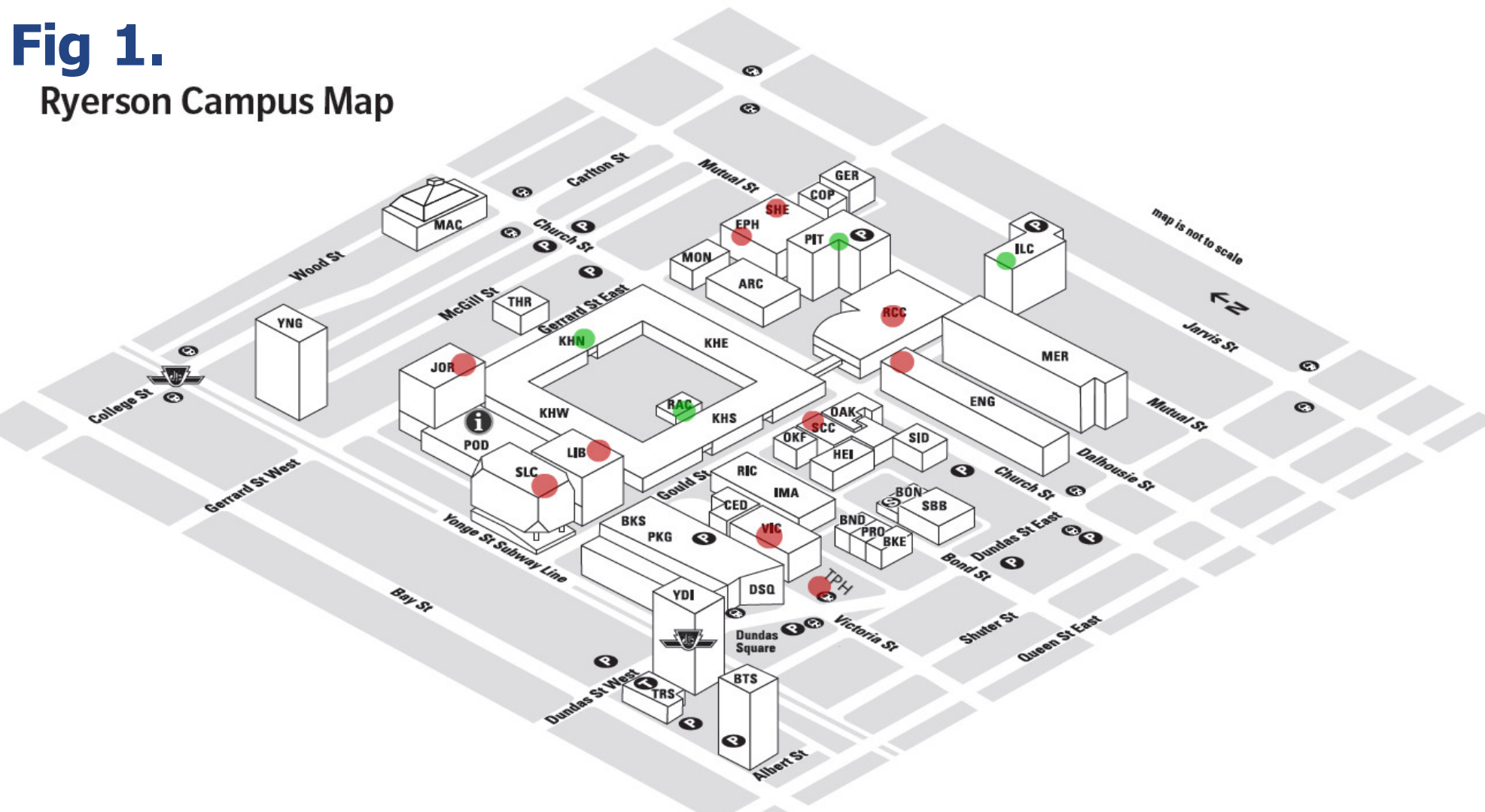
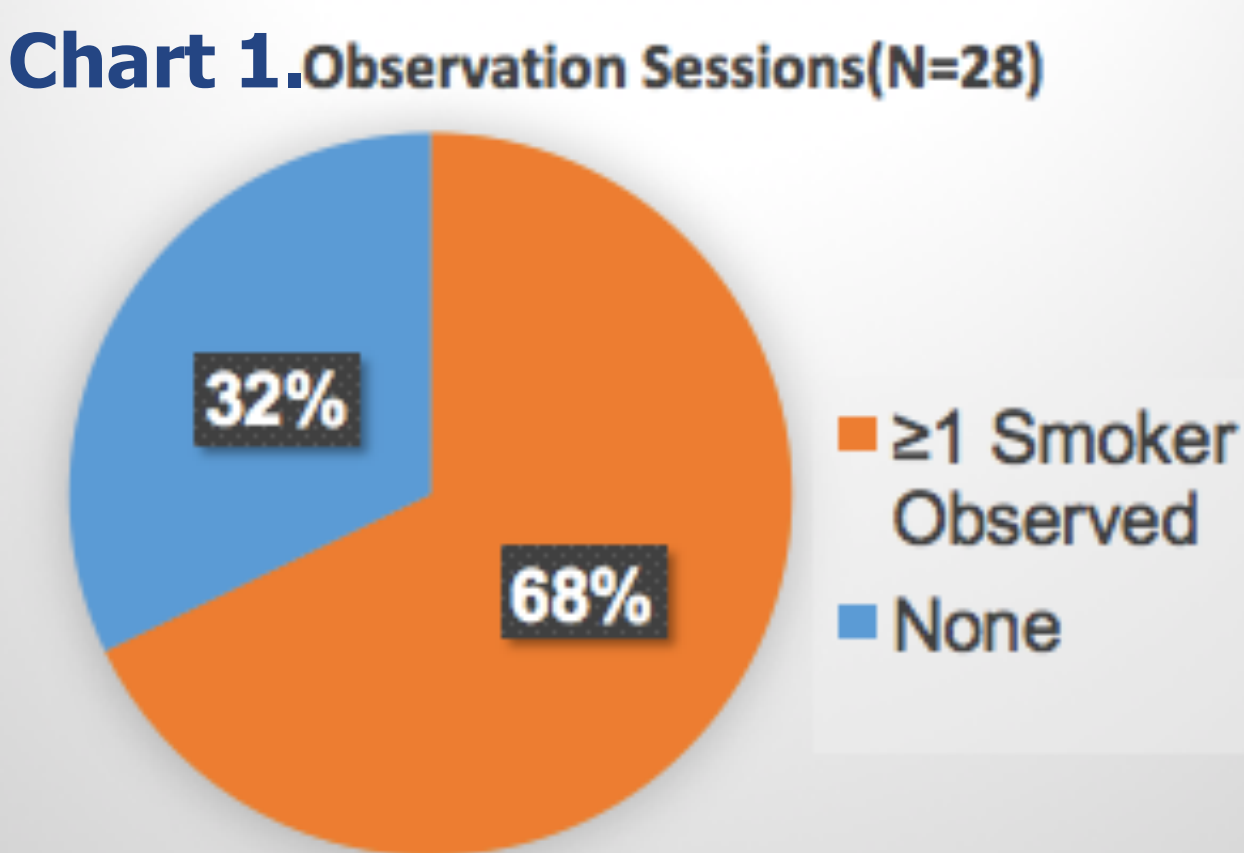


Fig1.Selected building marked on Ryerson campus map

Fig 2. Example of examination by using Google satellite view (VIC building entrance)



Chart 1. Percentage of at least one smoker observed in total observations sessions



Results

Table 1. Results of the number of smokers observed within nine meters outside the building's entrances and the conditions of weather during the observation sessions

		Total number	Percentage (%)of total observation sessions N=28	Mean	SD	Max	Min
Number of smokers observed		83	N/A	2.964	3.543	14	0
Description of the Weather during the observation sessions							
Outdoor Temperature (°C)		N/A	N/A	-1.75	2.689	4	-6
Wind	Windy	12	42.875				
	Calm	16	57.143				
Precipitation	Snow	4	14.286			N/A	
	None	24	85.714				

Table 2. Number of smokers observed and the percentages of characteristics of smokers

Characteristics of Smokers		Number of smokers observed	Percentage (%) of total smokers N=83
Gender	Female	22	26.506
	Male	61	73.494
Age	<40	74	89.157
	>40	9	10.843
Smoking Posture	Standing	69	83.133
	Sitting	14	16.867
Smoking Method	Cigarette	79	95.181
	Vaporizer	3	3.614
	Cigar	1	1.205
More than one cigarette		3	3.614
Cell Phone Use		12	14.458
Ryerson Uniform		1	1.205

- At least one smoking behaviour within 9 meters of the building entrance was observed in about 68% of the total 28 observation sessions. On average, there were about 3 smokers in each session
- The top three smoking sites on campus are the SLC, VIC and JOR building entrances
- Cigarettes are still the primary smoking method on campus
- 73% of smokers are male, 89% of smokers are younger than 40 years old, 83% of smokers stand while smoking



Examples of smoking prohibition signage on campus (photos taken by HZ). Cigarette stock image taken from <http://www.freeimages.com>

Discussion

- Observation was carried out during the winter. More sessions would be further conducted to verify weather-related hypotheses, for example as the outdoor temperature increases, the number of smokers observed increases.
- Recommended strategies:
 - Marking yellow lines or signs around the sites which are 9 meters away from the building entrances
 - Security guards enforcing the restriction by giving warnings and dispersing this behaviour
 - Organizing informative workshops and quit smoking programs
- Future research should include other variables, such as peer pressure

Reference

Kaufman, P., Griffin, K., Cohen, J., Perkins, N., & Ferrence, R. (2010). Smoking in urban outdoor public places: Behaviour, experiences, and implications for public health. *Health & Place*, 16(5), 961-968.

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